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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,565	04/22/2005	Ruediger Winter	2002DE141	6714

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CLARIANT CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
4000 MONROE ROAD
CHARLOTTE, NC 28205

EXAMINER

MATTHEWS, ABRAHAM M

ART UNIT	PAPER NUMBER
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1755

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/532,565

Applicant(s)

WINTER ET AL.

Examiner

Abraham M. Matthews

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/27/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12, and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,537,364 B2 to Dietz et al.

Regarding Applicants' claims 1-3, 7 and 8, Dietz et al. disclose a process for a fine division of pigments which comprises dissolving one or more coarsely crystalline crude pigments in a solvent and precipitating them with a liquid precipitation medium by spraying the pigment solution and the precipitation medium through nozzles to a point of conjoint collision in a reactor chamber enclosed by a housing in a microjet reactor, appropriately via one or more pumps, preferably high pressure pumps, a gas or an evaporating liquid being passed into the reactor chamber through an opening in the housing for the purpose of maintaining a gas atmosphere in the reactor chamber, especially at the point of collision of the jets, and where appropriate of effecting cooling as well, and the resulting pigment suspension and the gas or the evaporated liquid being removed from the reactor through a further opening in the housing by means of overpressure on the gas entry side or underpressure on the product and gas exit side (Dietz et al., column 1, lines 51-67, and Example 1a)

Dietz et al. also disclose one particularly preferred embodiment of the process of the invention wherein the pigment solution and the precipitation medium are sprayed against one another frontally through two opposed nozzles by means of two high-pressure pumps (Dietz et al., column 2, lines 49-52, and Example 1a). Dietz et al. also further disclose that spraying of said pigment solution and said precipitation medium was performed under a pressure of at least 10 bar, preferably at least 50 bar, in

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particular from 50 to 5000 bar, and also disclose that the said pigment solution and precipitation medium are discharged at a continuous volume flow rate of 0.5 m³/hr (i.e., 500 l/hr) under a pressure of 50 bar (Dietz et al., column 2, lines 4-7, and Example 1a).

The recitations of Applicants' claims 4-6, 9 and 10 can be found in the above reference at column 3, lines 42-65, and column 7, lines 64-67.

The recitations of Applicants' claims 11, 19 and 20 can be found in the above reference at column 8, lines 36-41; column 3, lines 53-54; column 7, lines 59-63, and column 8, lines 20-35.

Regarding Applicants' claims 12, 16, 17 and 18, Dietz et al., as applied to claim 1 above, disclose as a particularly preferred embodiment of the invention a three-jet reactor in which, for example by means of a high-pressure pump the pigment solution is sprayed to the point of conjoint collision through one nozzle and by means of a second high-pressure pump the precipitation medium is sprayed to the same point through two nozzles (Dietz, et al., column 2, lines 53-59; and column 1, lines 55-67). Dietz et al. also disclose that said microjet reactor may be configured as a two-jet, three-jet or multi-jet reactor, preference being given to a two-jet configuration. (Dietz et al., column 2, lines 32-34). With regard to temperature sensing or monitoring, Dietz et al. also further disclose that where necessary, the introduced gas or the evaporating liquid that is used to maintain the gas atmosphere in the inside of the housing may be used for cooling, and that an evaporating cooling liquid or a cooling gas may be introduced into the reactor chamber by way of an additional bore in the housing, and that the aggregate state of the cooling medium may be conditioned by temperature and/or pressure (Dietz et al., column 3, lines 5-11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,537,364 B2 to Dietz et al., as applied to claims 1 and 12 above.

Regarding Applicants' claim 13, Dietz et al., as applied to claims 1 and 12 above, disclose a three-jet reactor in which, by means of a high-pressure pump the pigment solution is sprayed to the point of conjoint collision through one nozzle and by means of a second high-pressure pump the precipitation medium is sprayed to the same point through two nozzles. Dietz et al. also further disclose that in a case of an arrangement with two jets, the jets preferably strike one another frontally (180° angle between the jets); in the case of a three-jet arrangement, an angle of 120° between the jets is appropriate (Dietz et al., column 2, lines 34-38). By extension of the teaching of Dietz et al., it would be obvious to make a said reactor or device wherein the axes of the nozzles or jets are set at an angle of between 0° and 90° , as recited in claim 13, by increasing

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the number of jet or nozzle arrangements as noted above in order to achieve superior performance.

Regarding Applicants' claims 14 and 15, Dietz et al., as applied to claims 1 and 12 above, disclose a three-jet reactor in which, by means of a high-pressure pump the pigment solution is sprayed to the point of conjoint collision through one nozzle and by means of a second high-pressure pump the precipitation medium is sprayed to the same point through two nozzles. However, Dietz et al. do not specifically disclose a device or a reactor wherein the chamber has a volume of from 0.1 to 100 ml, or from 1 to 10 ml., as recited in Applicants' claims 14 and 15, respectively. Nonetheless, the claimed volume ranges of the chamber would have been the result of a routine experimentation by one of ordinary skill in the art with the aim of optimizing the process of fine division of pigments, suspensions or dispersions.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

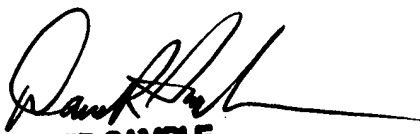
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abraham M. Matthews whose telephone number is (571) 272-2495. The examiner can normally be reached on M-F 8:00 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMM



DAVID SAMPLE
PRIMARY EXAMINER